

CEUS NEHRP Research Review and Planning Workshop

8:00AM-5:00PM February 25 and 26, 2014

FedEx Institute of Technology Room 203/205, Innovation Drive, University of Memphis

Thanks to the support of the West Tennessee Seismic Safety Commission, there will be breakfast and lunch available to attendees on February 25th and 26th

Schedule

Tuesday February 25

8:00 - 8:10 AM Welcome and Workshop Overview
(Rob Williams *USGS*, Chuck Langston *CERI*)

8:10 - 8:30 AM National Hazards Maps (Chuck Mueller *USGS*)

Induced Seismicity (Justin Rubinstein *USGS*, Steve Horton *CERI*)

8:30 - 9:00 AM Overview of Induced Earthquakes in Central and Eastern North America (Steve Horton *CERI*)

9:00 - 9:30 AM Overview of the Regulatory Response to the 2010-2011 Guy-Greenbrier Earthquake Swarm in North-Central Arkansas (Scott Ausbrooks *Arkansas Geological Survey*)

9:30 - 10:00 AM Industry Perspective on Induced Seismicity from Fluid Injection (Shawn Maxwell *Schlumberger*)

Break and Poster Viewing

10:30 - 10:45 AM Quantifying the Seismic Hazard from Natural and Induced Earthquakes (Justin Rubinstein *USGS*)

10:45 - 11:00 AM Effects of Induced Seismicity on Seismic Hazards (Chuck Mueller *USGS*)

11:00 - 11:15 AM Evaluation of Seismic Hazards from Induced Seismicity (Gail Atkinson *UWO*)

11:15 - 11:30 AM Hydrogeologic modeling of high volume injection in the Jones Area, Oklahoma (Matthew Weingarten *UC Boulder*)

11:30 - 12:00 noon Discussion

Meeting Lunch (Speaker: Mike Blanpied *USGS* on Washington D.C. outlook for science)

Ground Motions (Gail Atkinson *UWO*, Chuck Langston *CERI*)

1:30 - 2:00 PM Engineering Ground Motions (Gail Atkinson *UWO*)

2:00 - 2:30 PM Lg Wave Propagation and Ground Motions (Chuck Langston *CERI*)

2:30 - 3:00 PM 3D Velocity Models and Wave Simulations (Leo Ramirez-Guzman *UNAM*)

Break and Poster Viewing

3:30 - 3:40 PM NGA-East Overview (Christine Goulet *PEER UC Berkeley*)

3:40 - 3:50 PM GMPEs and NGA-East (Chris Cramer, Nayeem Al-Noman, Phillip Ogwen, *CERI*)

3:50 - 4:00 PM Hybrid Empirical Model (Ken Campbell *EQECAT*)

4:00 - 4:10 PM CEUS Ground Motion Models Used in The 2014 NSHMs (Sanaz Rezaeian *USGS*)

4:10 - 4:20 PM Lg wave attenuation in the CEUS (Martin Chapman *VPI*, Shahram Pezeshk *UM*)

4:20 - 4:30 PM Earthquake Simulations as a tool to gain insight from velocity models (Ricardo Taborda *CERI*)

4:30 - 5:00 PM Discussion

Wednesday February 26

8:00 - 8:30 Poster 2-minute advertisements by presenters

CEUS Earthquake System (Sue Hough *USGS*, Chris Powell *CERI*)

8:30 - 9:00 AM CEUS Earthquakes overview (Chris Powell *CERI*)

9:00 - 9:30 AM Tectonic framework overview (Bill Thomas *UK*)

9:30 - 9:40 AM Earthquakes and faults of the Canadian shield (Maurice Lamontagne *GSC*)

9:40 - 9:50 AM Origin of Earthquakes in the EUS (Robert Hatcher *UT*)

9:50 - 10:00 AM Complex faulting and swarm activity along the New Madrid Seismic Zone (Heather DeShon *SMU*)

Break and poster viewing

10:30 - 10:40 AM State of stress and possible sources of loading for earthquakes in the CEUS (Bill Holt *SUNY Stony Brook*)

10:40 - 10:50 AM Recent GPS results (Bob Smalley *CERI*)

10:50 - 11:00 AM What's so special about New Madrid? (Sue Hough *USGS*)

11:00 - 11:10 AM Debunking the long-lived aftershock hypothesis (Morgan Page *USGS*)

11:10 - 11:20 AM Variation of b-value in the NMSZ (Akram Mostafanejad *CERI*)

11:20 - 11:30 AM The search for seismically active structures in the northeastern U.S.: latest results (John Ebel *Boston College*)

11:30 - 12:00 noon Discussion

Meeting Lunch (Speaker: Julie Furr, *Chad Stewart & Associates*, on local building code issues and history)

Quaternary Geology (Roy VanArsdale *UM*, Beatrice Magnani *SMU*)

- 1:30 - 2:00 PM Quaternary structural and geomorphic evolution of the New Madrid seismic zone region (Roy VanArsdale *UM*)
- 2:00 - 2:30 PM Quaternary tectonics of the Mississippi River valley from the exploration seismology perspective (Tom Pratt *USGS*)
- 2:30 - 2:40 PM Quaternary fault and source criteria for NSHM (Oliver Boyd *USGS*)
- 2:40 - 2:50 PM LIDAR in the Mississippi River valley (Ryan Gold *USGS*)
- 2:50 - 3:00 PM Quaternary geology in the Mississippi River valley (Margaret Guccione *UA*)

Break and poster viewing

- 3:30 - 3:40 PM Paleoseismology of the Wabash Valley seismic zone region (Ron Counts *KGS*)
- 3:40 - 3:50 PM Paleoseismology and seismic source zones south of the NMSZ and the East TN seismic zone (Randy Cox *UM*)
- 3:50 - 4:00 PM Paleoliquefaction and geophysical tools in the study of paleoliquefaction (Haydar Al-Shukri *UALR*)
- 4:00 - 4:10 PM Mississippi River reflection profiles and follow-up (Beatrice Magnani *SMU*)
- 4:10 - 4:20 PM Geoscience response and lessons from the 2011 Virginia earthquake (Wright Horton *USGS*)
- 4:20 - 4:30 PM Quantitative geomorphology research in the eastern United States (Sean Gallen *UMich*)
- 4:30 - 5:00 PM Discussion

5:00 - 5:15 PM Workshop Wrap-up (Rob Williams *USGS*, Chuck Langston *CERI*)